

EXECUTIVE DEPARTMENT OFFICE OF MANAGEMENT AND BUDGET Budget Development, Planning and Administration State Planning Coordination

October 22, 2008

Mr. Jeff Clark Land Tech Land Planning 118 Atlantic Avenue, Ste. 202 Ocean View, DE 19970

RE: PLUS review – 2008-09-13; Village Brooke East

Dear Mr. Clark:

Thank you for meeting with State agency planners on September 27, 2008 to discuss the proposed plans for the Village Brook East project to be located east of Route 14 within the Town of Laurel.

According to the information received, you are seeking site plan approval for 284 residential units on 77.56 acres.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as the Town of Laurel is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the Town.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. *Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.*

State Strategies/Project Location

The proposed project is located within an Investment Level 1 according to the State Strategies for Policy and Spending and calls for the 284 residential units on 77.56 acres adjacent to the Town of Laurel.

It should be noted the applicant has or has been annexed into the Town of Laurel in compliance with their most recent certified comprehensive land use plan.

Street Design and Transportation

- US Route 9 is classified as a minor arterial highway and Discount Land Road is classified as a local road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 40 feet from the centerline on minor arterial highways and 30 feet from the centerline on local roads. Therefore we will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- 2) DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage on both roads and to provide a 10-foot wide shared use path within that easement on Discount Land Road.
- 3) DelDOT appreciates that the Preliminary Master Plan included in the PLUS application may be somewhat conceptual. They offer the following comments on it nonetheless:
 - a) The plan shows a storm water management pond that may be too close to Discount Land Road.
 - b) DelDOT recommends that dead end streets be designed with cul-de-sacs or other turnarounds, so that visitors do not have to back out or turn around in someone's driveway and that where possible the dead end streets be extended to tie back into the internal street system.
 - c) DelDOT recommends that an internal connection be provided to the selfstorage area so that residents can visit their storage units without using Discount Land Road.

Natural and Cultural Resources

Rogers Branch, a blue line stream, flows across the southeast corner of the
property that will be impacted by the proposed development. This blue line
feature on the property is subject to the requirements of the State Subaqueous
Lands Regulations and cannot be filled in without a permit from the Wetlands and
Subaqueous Lands office. Options for the project include redesigning around the

blue line features. The developer may be able to mitigate; however, to do so, they may have to reduce the size of the project.

- The Drainage Program recommends the creation of a maintenance plan for Rogers Branch. The Drainage Program recommends a maintenance area on each side of Rogers Branch. The area should be dedicated open space and utilized for mechanized maintenance, and possible spoil placement, if the branch requires periodic maintenance or future re-construction.
- To adequately protect water quality and to provide wildlife habitat, this buffer should be at least 100 feet in width. There are both lots and infrastructure within 100 feet of this riparian wetland area (in southeastern quadrant of plan) and they should be pulled out of the buffer zone.

This office has received the following comments from State agencies:

Office of State Planning Coordination – Contact: 739-3090

The proposed project is located within an Investment Level 1 according to the State Strategies for Policy and Spending and calls for the 284 residential units on 77.56 acres adjacent to the Town of Laurel. This Office has no objection to the proposed and encourages the applicant to work closely with the Town of Laurel and state agencies to address any concerns or recommendations outlined in this report.

State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685

No comments received

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 4) A traffic impact study (TIS) would be warranted for this development if the plans were accepted for review by the Town after March 31, 2008. However, a TIS will be required for Village Brooke North. The traffic from this development and Village Brooke West will be included in that TIS and we anticipate making recommendations that could be applied to these developments as well. Therefore separate studies for each development do not seem necessary.
- US Route 9 is classified as a minor arterial highway and Discount Land Road is classified as a local road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 40 feet from the centerline on minor arterial highways and 30 feet from the centerline on local roads. Therefore we will require right-of-way dedication along the frontage to provide any additional width needed from this project.

- 6) DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage on both roads and to provide a 10-foot wide shared use path within that easement on Discount Land Road.
- 1) DelDOT appreciates that the Preliminary Master Plan included in the PLUS application may be somewhat conceptual. They offer the following comments on it nonetheless:
 - d) The plan shows a storm water management pond that may be too close to Discount Land Road. Such a pond would be acceptable if the developer provides a 20-foot minimum buffer between the ultimate right-of-way and the top of slopes of the pond and the runoff from the site is managed such that the rate and volume of the post-development runoff would not exceed the rate and volume of the pre-development runoff. However, DelDOT would prefer that the ponds be placed farther from the road.
 - e) DelDOT recommends that dead end streets be designed with cul-de-sacs or other turnarounds, so that visitors do not have to back out or turn around in someone's driveway, and that where possible the dead end streets be extended to tie back into the internal street system. See Chapter 3 of DelDOT's <u>Standards and Regulations for Subdivision Streets and State Highway Access</u> regarding connectivity within developments and Chapter 5 regarding the design of cul-de-sacs and other turnaround features.
 - f) DelDOT recommends that an internal connection be provided to the selfstorage area so that residents can visit their storage units without using Discount Land Road.
- 2) DelDOT recommends that the developer's site engineer contact our Subdivision Manager for western Sussex County, Mr. Derek Sapp, for more detailed comments. Mr. Sapp may be reached at (302) 760-4803.

<u>The Department of Natural Resources and Environmental Control - Contact:</u> <u>Kevin Coyle 739-9071</u>

Soils

According to the NRCS soil survey update, Pepperbox-Rosedale complex (PsA), Glassboro (GoA), Udorthents (UdB), and Hurlock (HvA) were mapped in the immediate vicinity of the proposed construction (See figure 1). Pepperbox-Rosedale complex is a moderately well-drained to well-drained upland soil that has moderate to few limitations. Glassboro is a somewhat poorly-drained transitional soil (i.e., upland/wetland interface) likely to have both wetland and upland soil components. Udorthents are soils with variable site-specific limitations which have been extensively modified through excavation, filling or grading activities. Hurlock is a poorly-drained wetland associated

(hydric) soil that has severe limitations for development. Approximately 10% of the soils mapped on subject parcel(s) lands were mapped as Hurlock. Hurlock soils, as mentioned previously, have severe limitations for development and should not be developed.



Figure 1: NRCS soil survey update mapping in the immediate vicinity of Village Brook East

Wetlands

Based on Statewide Wetlands Mapping Project (SWMP) mapping, palustrine forested scrub-shrub forested (PSS3/F01A), palustrine forested (PF01A), Palustrine emergent (PEM1Cx), and Palustrine unconsolidated bottom (PUBHx; an excavated pond) wetlands were mapped in the immediate vicinity of the proposed construction (See figure 2).

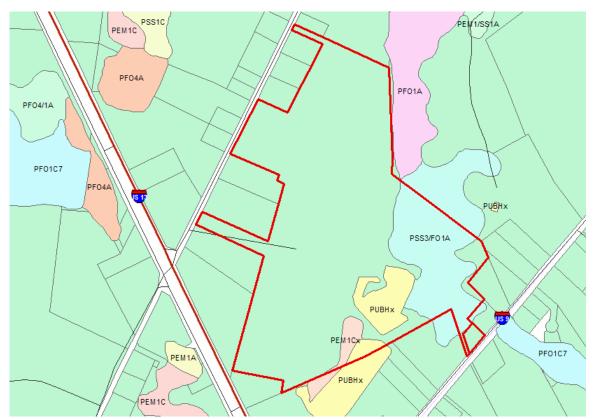


Figure 2: SWMP mapping in the immediate vicinity of Village Brook East

Rogers Branch, a blue line stream, flows across the southeast corner of the property that will be impacted by the proposed development. This blue line feature on the property is subject to the requirements of the State Subaqueous Lands Regulations and cannot be filled in without a permit from the Wetlands and Subaqueous Lands office. Options for the project include redesigning around the blue line features. The developer may be able to mitigate; however, to do so, they may have to reduce the size of the project.

DNREC could not find any record of a jurisdictional determination on the property. They may want to request one, as most developers do, to determine if all or just a portion of the blue line features are jurisdictional under State regulations. Additionally, the SWMP maps show wetlands regulated by the Corps of Engineers on the southeast part of the property next to Rogers Branch where there is proposed development. The developer should contact the Corps of Engineers to get a jurisdictional determination for the property.

The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 <u>Del.C</u>. Chapter 66 and the <u>Wetlands Regulations</u>) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal

authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section.

In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 <u>Del.C</u>. Chapter 72) and the <u>Regulations Governing the Use of Subaqueous Lands</u>. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Please contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A sitespecific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE, or "the Corps") manual is the only acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for making such delineations. To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant's consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands, the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps; they can be reached by phone at 736-9763.

Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review.* J. Environ. Qual. 23: 878-882), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands.

As mentioned previously, a significant portion of this parcel contains poorly-drained wetland associated (hydric) Hurlock soils (approximately 10%) which have a seasonal high water table occurring at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as

tropical storms/hurricanes or "nor'easters." This is in addition to increased flooding probabilities from surface water runoff emanating from future created or constructed forms of structural imperviousness (e.g., rooftops, roads, sidewalks, and stormwater management structures).

Impervious Cover

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of this project's most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

ERES Waters

This project is located adjacent to receiving waters of the Nanticoke watershed – which Broad Creek is part - and designated as having waters of Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Moreover, provisions defined in subsection 5.6.3.5 of same section, specially authorize the Department to mandate BMPs to meet standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Broad Creek watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the Broad Creek watershed, "target-rate-nutrient reductions" of 30 and 50 percent will be required for nitrogen and phosphorus, respectively. Additionally, "target-rate-reductions" of 2 percent will be required for bacteria.

TMDL Compliance through the PCS

As indicated above, TMDLs for nitrogen and phosphorus have been proposed for the Broad Creek watershed. The TMDL calls for a 30 and 50 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 2 percent reduction in bacteria. A Pollution Control Strategy (PCS) will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of BMPs such as wider vegetated buffers along watercourses/wetlands, increasing the amount of passive, wooded open space, use of pervious paving materials to reduce surface imperviousness, and deployment of greentechnology stormwater management treatment technologies. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Water Supply

The information provided indicates that the Town of Laurel will provide water to the proposed projects through a public water system. Our files reflect that the Town of Laurel does not currently hold a Certificate of Public Convenience and Necessity (CPCN) to provide public water in these areas. According to §203C, Subchapter II, Chapter 1, Title 26, Delaware Code, the municipality is required to give notice to the Public Service Commission when the annexation is complete. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-736-7547. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees.
- Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals. The Sediment and Stormwater Management Program ensures that sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, we do not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice.

Drainage

- The Drainage Program recommends the creation of a maintenance plan for Rogers Branch. The Drainage Program recommends a maintenance area on each side of Rogers Branch. The area should be dedicated open space and utilized for mechanized maintenance, and possible spoil placement, if the branch requires periodic maintenance or future re-construction. Identify maintenance access points and spoil disposal areas on the sediment and stormwater plans.
- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.
- Have all drainage easements recorded on deeds and place restrictions on
 obstructions within the easements to ensure access for periodic maintenance or
 future re-construction. Future property owners may not be aware of a drainage
 easement on their property if the easement is only on the record plan. However,
 by recording the drainage easement on the deed, the second owner, and any
 subsequent owner of the property, will be fully aware of the drainage easement on
 their property.

- The Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine wetlands on the wooded area on the southeast side of the property. The amount of proposed tree removal from this area appears excessive. The Drainage Program recommends limited tree removal in this area. Where practical, plant native trees, and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided. Even with these measures this area may not provide adequate residential drainage. A part of the wooded area is mapped as Fallsington soil, which has a high water table and poor natural drainage. Limitations for foundations for homes of three stories or less is severe due to a high water table. Crawl spaces and basements within this area are very questionable. If this area is developed as proposed, especially with crawl spaces and basements, a statement should be on the deed informing the prospective buyers that future drainage problems are very likely.
- Preserve existing riparian buffers on this site to aid in the reduction of nutrients, sediment, and other pollutants entering Rogers Branch. This site will drain into Records Pond, which has existing water quality problems. Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing stormwater into the Records Pond watershed.

Rare Species

DNREC has never surveyed this property; therefore, it is unknown if there are State-rare or federally listed plants, animals or natural communities at this project site. DNREC have records of numerous rare species downstream, therefore, maintaining adequate forested riparian buffer along Rogers Branch would be extremely important for minimizing impacts to these species and to water quality.

Recommendation: to adequately protect water quality and to provide wildlife habitat, this buffer should be at least 100 feet in width. There are both lots and infrastructure within 100 feet of this riparian wetland area (in southeastern quadrant of plan) and they should be pulled out of the buffer zone.

Forest Preservation

As with the Neal Property (PLUS 2007-02-10) application, this project proposes to remove 12.5 out of 16 acres of forest. The current plan proposes approximately 44 single family detached units in the wooded area, whereas the Neal Property proposed approximately 25 units.

The GIS database and State wetland maps indicate that a rather large part of the forest contains wetlands. Impacts to this habitat type should be avoided as it can support an array of plant and animal species. This forest is also part of a larger forest block, and larger, connected areas of forest are important for many species of wildlife especially

migratory birds. Forest fragmentation separates wildlife populations, increases road mortality, and increases "edge effects" that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species.

Recommendations:

- 1. A greater effort to preserve existing trees could be made, and we suggest the applicant consider omitting or relocating some of the approximately 44 units/structures currently located within the southeastern quadrant of the site plan.
- 2. If trees are cleared, despite the recommendations above, it is recommended that clearing not occur April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. This clearing recommendation would only protect those species during one breeding season; once trees are cleared the result is an overall loss of habitat.

Nuisance Geese

Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species.

The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the size of the ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Recommendations: The applicant indicated that they were going to utilize a nuisance species management plan. The plan should include plantings of native tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds. When the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to reside and nest in the area of the pond. The vegetation also blocks the ability to easily move between land and water.

At this time, we do not recommend using monofilament grids due to the potential for birds and other wildlife to become entangled if the grids are not properly installed and maintained. In addition, the on-going maintenance (removing entangled trash, etc.) may become a burden to the property owner/land manager.

Site Investigation and Restoration

One (1) Site Investigation & Restoration Branch (SIRB) site was found within a half mile radius of the proposed site: Whites Salvage (DE-0329), located adjacent to the southern portion of the proposed project. Whites Salvage received a No Further Action designation in 2007.

Based on the previous agricultural use of the proposed project site, which may have involved the use of pesticides and herbicides, and the location of the SIRB site, SIRB recommends that a Phase I Environmental Site Assessment be performed prior to development. In addition, should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions.

Under/Aboveground Storage Tanks

There are two (2) inactive LUST sites located within a quarter mile from the proposed project:

Name: Laurel Save Facility ID: 5-000285 Project: S9911248

Name: Laurel Exxon Facility ID: 5-000313 Project: S9605077

Should any underground storage tanks or petroleum contaminated soil be discovered by any person during construction, the DNREC-TMB at (302) 395-2500 and the DNREC Emergency Response Hotline at (800) 662-8802 must be notified within 24 hours.

Should any contamination be encountered, PVC pipe materials will have to be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

Also, please note that if any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.

Solid and Hazardous Waste

The solid and hazardous waste management branch does not regulate borrow pits. If during construction unauthorized waste disposal is discovered, an Environmental Protection Officer should be called.

Air Quality

Housing developments may unnecessarily emit, or cause to be emitted, significant amounts of air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from housing developments include emissions from:

- Area sources like painting, lawn and garden equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the homes in your development, and
- Car and truck activity associated with the homes in your new development.

These three air emissions components (i.e., area, electric power generation, and mobile sources) are quantified below, based on a per household/residential unit emission factor that was developed using 2002 Delaware data. These emissions in the table represent the actual impact the Village Brooke East development may have.

Emissions Attributable to Village Brooke East Subdivision (Tons per Year)

	Volatile			Fine	
	Organic	Nitrogen	Sulfur	Particulate	Carbon
	Compounds	Oxides	Dioxide	Matter	Dioxide
	(VOC)	(NOx)	(SO_2)	$(PM_{2.5})$	(CO_2)
Direct Residential	8.8	1.0	0.8	1.0	35.6
Electrical Power Generation	ND*	3.5	12.1	ND*	1,787.5
Mobile	21.8	18.0	13.3	1.2	1,823.2
Total	30.6	22.5	26.2	2.2	3,646.3

^(*) *Indicates data is not available.*

Note that emissions associated with the actual construction of the subdivision, including automobile and truck traffic from working in, or delivering products to the site, as well as

PLUS – 2008-09-13 Page 15 of 20

site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

Recommendations:

The applicant shall comply with all applicable Delaware air quality regulations. These regulations include:

Regulation 6 - Particulate Emissions from Construction and Materials Handling	 Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. Using covers on trucks that transport material to and from site to prevent visible emissions.
Regulation 1113 –	Prohibiting open burns statewide during the Ozone
Open Burning	Season from May 1-Sept. 30 each year.
	 Prohibiting the burning of land clearing debris.
	Prohibiting the burning of trash or building
	materials/debris.
Regulation 1145 –	Restricting idling time for trucks and buses having a
Excessive Idling of	gross vehicle weight of over 8,500 pounds to no more
Heavy Duty Vehicles	than three minutes.

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- Constructing only energy efficient homes. Energy Star qualified homes are up to 30% more energy efficient than typical homes. These savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of increased energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.
- Offering geothermal and/or photo voltaic energy options. These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- Providing tie-ins to the nearest bike paths and links to any nearby mass transport system. These measures can significantly reduce mobile source emissions.
- Funding a lawnmower exchange program. New lawn and garden equipment emits significantly less than equipment as little as 7 years old, and may significantly reduce emissions from this new development. The builder could fund such a program for the new occupants.

Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

- Using retrofitted diesel engines during construction. This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- Using pre-painted/pre-coated flooring, cabinets, fencing, etc. These measures
 can significantly reduce the emission of VOCs from typical architectural coating
 operations.
- Planting trees at residential units and in vegetative buffer areas. Trees reduce emissions by trapping dust particles and by replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development on air quality. The applicant should submit a plan to the DNREC Air Quality Management Section which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Village Brooke East development. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402.

State Fire Marshal's Office – Contact: Duane Fox 856-5298

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. Fire Protection Water Requirements:

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required. For the area where Mini-Storage buildings are proposed, water distribution system capable of delivering at least 750 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
- ➤ Where a water distribution system is proposed for townhouse type dwellings it shall be capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required.
- > The infrastructure for fire protection water shall be provided, including the size of water mains.

➤ Where Mini-Storage buildings are proposed, with few exceptions, sprinkler protection will be required.

b. Accessibility:

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main thoroughfare(s) must be constructed so fire department apparatus may negotiate it. If a "center island" is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turnaround or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- ➤ The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- ➤ The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

c. Gas Piping and System Information:

> Provide type of fuel proposed, and show locations of bulk containers on plan.

d. **Required Notes**:

- ➤ Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- ➤ Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Scott Blaier 739-4811

The Delaware Department of Agriculture has no objections to the proposed development. The project is located within the Town of Laurel, and the *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 2 and 3 areas.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the "Right Tree for the Right Place" for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Do Not Plant List

Due to the high risk of mortality from insects and disease, the Delaware Forest Service does not recommend planting any of the following species:

Callery Pear Leyland Cypress Red Oak (except for Willow Oak) Ash Trees

Please contact the Delaware Forest Service for more information at (302) 698-4500.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent landuse activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

<u>Delaware Division of Public Health- Health Promotion Bureau- contact Michelle</u> Eichinger (302) 744-1011

Village Brook East

As a way to promote physical activity and access to healthy foods, we recommend that the following amenities be included in the Village Brook East plan:

Amenities to encourage active transportation

- Ensure that there are sidewalks, crosswalks and walking/bicycling paths connecting the residential developments to the commercial development. Further, ensure there is a way to connect paths in the developments and existing paths.
- Designate bike paths to supplement the sidewalks already proposed in the plan so
 that residents can travel by foot or by bicycle. In addition, install bike racks in
 convenient locations around the property, including areas around the
 neighborhood community center.

Amenities to encourage active recreation

- Designate open space for active recreation for the residents in this community. Consider including a picnic area, as well as, tennis courts, basketball courts, shuffleboard, or horseshoe areas.
- Even though this is an active adult community, the incorporation of playgrounds would provide active recreation opportunities for children who visit. If feasible, consider including a walking path around the playground areas.

Increase opportunities for healthy eating

• Consider including a community garden in areas close to the neighborhood activity centers. Community gardens not only provide opportunities for community engagement, but they also provide access to fresh produce and, as well as an opportunity for physical activity.

Delaware State Housing Authority – Contact Vicki Powers 739-4263

This proposal is for a site plan of 284 residential units on 77 acres located southeast of Country Road 468, east of Route 13 within the Town of Laurel. According to the *State*

¹ Nemours Health and Prevention Services (2005). *Delaware Children's Health Chartbook*, Newark, DE.

² Active Living by Design. *Transportation Fact Sheet*. Retrieved May 17, 2007, from http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/Transportation_Factsheet.pd f.

³ Delaware Health and Social Services (2008), *Division of Public Health, Behavioral Risk Factor Surveillance System (BRFSS)*, 1990-2007.

⁴ Nemours Health and Prevention Services (2007). 2006 Delaware Survey of Children's Health Descriptive Statistics Summary, Volume 1.

Strategies Map, the proposal is located in an Investment Level 1 area. DSHA supports this proposal because residents will have proximity to services, markets, and employment opportunities. Furthermore, the proposal targets this development as an active adult community. According to the most recent real estate data collected by DSHA, the median home price in Sussex County is \$260,000. However, households earning respectively 100% of Sussex County's median income only qualify for mortgages of \$164,791, thus creating an affordability gap of \$95,209. Furthermore, the elderly are the fastest growing segment of our population, specifically in Sussex County. We encourage both the Town of Laurel and the developer to coordinate setting aside some of the units to be affordable to the elderly low- and moderate-income households. The provision of units within reach of households earning at least 100% of Sussex County's median income will ensure housing that is affordable to the elderly population.

<u>Department of Education - Contact: John Marinucci 735-4055</u>

No comments received.

Sussex County - Contact: Richard Kautz 855-7878

The town is encouraged to avoid the creation of new enclaves when annexing, to eliminate existing enclaves during its negotiation of the annexation agreement, and to notify the Sussex County Planning Department when the annexation becomes effective.

No comment about the project. The site is to be entirely within the town limits and does not directly impact County services or properties outside the town limits.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

Constance C. Holland, AICP

Constince C. Hallack

Director

CC: Town of Laurel